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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
(SAN FRANCISCO DIVISION)

LOOKSMART GROUP, INC.,	Case No. 3:17-cv-4709-JST
Plaintiff,	**MICROSOFT CORPORATION'S AMENDED ANSWER TO LOOKSMART GROUP, INC.'S COMPLAINT FOR PATENT INFRINGMENT**
v.	
MICROSOFT CORPORATION,	
Defendant.	

Pursuant to Rules 8 and 15 of the Federal Rules of Civil Procedure, Defendant Microsoft Corporation ("Microsoft") hereby amends its Answer to the Complaint for Patent Infringement of LookSmart Group, Inc., ("LookSmart" or "Plaintiff") of U.S. Patent No. 7,356,530 (the "Asserted Patent"). Microsoft denies the allegations and characterizations in LookSmart's Complaint unless expressly admitted in the following paragraphs:

THE PARTIES

1.   Microsoft is presently without sufficient information to admit or deny the allegations and characterizations in Paragraph 1 of the Complaint, and therefore they are denied.

2.   Admitted.

Jurisdiction

3.   Admitted.

4.   Microsoft does not contest personal jurisdiction in this action. Lookmart's personal jurisdiction allegation calls for a legal conclusion and therefore no answer is required. Microsoft

admits that it has regular and established places of business in this district and sells, markets, and

supports products and services within the Northern District of California, though it denies it has

infringed any valid claim of the Asserted Patent. To the extent there are any remaining allegations

or characterizations in Paragraph 4 of the Complaint, they are denied.

Venue

5.   Microsoft does not contest venue in this action. LookSmart's venue allegation calls

for a legal conclusion and therefore no answer is required. Microsoft denies that it has infringed

the Asserted Patent and that LookSmart is entitled to any relief.

Intradistrict Assignment

6.   LookSmart's Intradistrict Assignment allegation calls for a legal conclusion and

therefore no answer is required.

Background

7.   Microsoft admits that the World Wide Web is generally considered part of the

Internet, and hypertext media (e.g. Web pages) is available through multiple Web servers that host

such media. Microsoft also admits that access to such media is typically made via a URL typed

into or clicked (e.g. hypertext links) in a Web browser. It is unclear what is meant by the

remaining allegations and characterizations in Paragraph 7 of the Complaint, and therefore

Microsoft denies them.

8.   Microsoft admits the Google is a popular search engine for the Web, and that

Google has likely estimated the number of Web pages, and that others have, at times, estimated

how many Websites have existed, though Microsoft is presently without information to confirm

the methodology and accuracy of those estimates. Microsoft is presently without knowledge or

information sufficient to form a belief as to the truth of the allegations and characterizations that

remain in Paragraph 8 of the Complaint, and therefore it denies them.

9.   Microsoft admits that the WWW paradigm removed some traditional barriers to

publishing information. Microsoft also admits that there are some differences in the way

information accessed through the WWW is indexed as compared to a traditional public library.

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1 Microsoft admits that it can sometimes be difficult to find information accessed through the

2 WWW. Microsoft is presently without knowledge or information sufficient to form a belief as to

3 the truth of the remaining allegations and characterizations of Paragraph 9 of the Complaint, and

4 therefore denies them.

5   10.   Microsoft admits that users have different options for finding information accessed

6 through the WWW and that each can present challenges regarding how information might be

7 discovered. Microsoft is presently without knowledge or information sufficient to form a belief as

8 to the truth of the remaining allegations and characterizations of Paragraph 10 of the Complaint,

9 and therefore denies them.

10   11.   Microsoft admits that in some cases there can be hundreds or thousands of possibly

11 relevant pages responsive to a query into a search engine. Microsoft further admits that it is likely

12 most users do not review all the documents identified in response to a query. Microsoft is

13 presently without knowledge or information sufficient to form a belief as to the truth of the

14 remaining allegations and characterizations of Paragraph 11 of the Complaint, and therefore

15 denies them.

16   12.   Microsoft admits that sorting and ranking search results can increase the chances

17 that the most relevant search results are presented to a search engine user. Microsoft is presently

18 without knowledge or information sufficient to form a belief as to the truth of the remaining

19 allegations and characterizations in Paragraph 12 of the Complaint, and therefore denies them.

20   13.   Microsoft admits that ranking algorithms used by search engines can consider

21 multiple factors, including the content of the page and its location. Microsoft admits that it is

22 possible in some scenarios to increase the rank of a page by repeating words. Microsoft admits

23 that search engines can also consider hyperlinks that point to the page, and that those hyperlinks

24 can convey additional information about the page. Microsoft is presently without knowledge or

25 information sufficient to form a belief as to the truth of the remaining allegations and

26 characterizations in Paragraph 13 of the Complaint, and therefore denies them.

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U.S. Patent No. 7,356,530

2   14.   To the extent Paragraph 14 of the Complaint implicates legal conclusions, no

3   response is required. Microsoft admits that the Asserted Patent purports to provide methods to

4   improve ranking and reduce the latency of search results generated in response to a query, and that

5   it ultimately issued as a patent. Microsoft denies the remaining allegations of Paragraph 14.[1]

6   15.   To the extent Paragraph 15 of the Complaint implicates legal conclusions, no

7   response is required. Microsoft admits that Figure 1 purports to depict various components of an

8   embodiment of a search engine referenced in the Asserted Patent. Microsoft is presently without

9   knowledge or information sufficient to form a belief as to the truth of the remaining allegations

10   and characterizations of Paragraph 15 of the Complaint, and therefore denies them.

11   16.   To the extent Paragraph 16 of the Complaint implicates legal conclusions, no

12   response is required. Microsoft is presently without knowledge or information sufficient to form a

13   belief as to the truth of the allegations and characterizations in Paragraph 16 of the Complaint, and

14   therefore denies them.

15   17.   To the extent Paragraph 17 of the Complaint implicates legal conclusions, no

16   response is required. Microsoft is presently without knowledge or information sufficient to form a

17   belief as to the truth of the allegations and characterizations in Paragraph 17 of the Complaint, and

18   therefore denies them.

19   18.   To the extent Paragraph 18 of the Complaint implicates legal conclusions, no

20   response is required. Microsoft is presently without knowledge or information sufficient to form a

21   belief as to the truth of the allegations and characterizations in Paragraph 18 of the Complaint, and

22   therefore denies them.

23   19.   To the extent Paragraph 19 of the Complaint implicates legal conclusions, no

24   response is required. Microsoft is presently without knowledge or information sufficient to form a

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[1] Microsoft further objects to and denies the unsupported conclusions and statements in the Declaration of Michael J. Pazzani (Exhibit D).

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1   belief as to the truth of the allegations and characterizations in Paragraph 19 of the Complaint, and

2   therefore denies them.

3   20.   To the extent Paragraph 20 of the Complaint implicates legal conclusions, no

4   response is required. Microsoft admits a definition of "page weight" from the Asserted Patent is

5   quoted in Paragraph 20. Microsoft is presently without knowledge or information sufficient to

6   form a belief as to the truth of the remaining allegations and characterizations in Paragraph 20 of

7   the Complaint, and therefore denies them.

8   21.   To the extent Paragraph 21 of the Complaint implicates legal conclusions, no

9   response is required. Paragraph 21 is also ambiguous and confusing. Microsoft is presently

10   without knowledge or information sufficient to form a belief as to the truth of the allegations and

11   characterizations in Paragraph 21 of the Complaint, and therefore denies them.

12   22.   To the extent Paragraph 22 of the Complaint implicates legal conclusions, no

13   response is required. Paragraph 22 is also ambiguous and confusing. Microsoft is presently

14   without knowledge or information sufficient to form a belief as to the truth of the allegations and

15   characterizations in Paragraph 22 of the Complaint, and therefore denies them.

16   23.   To the extent Paragraph 23 of the Complaint implicates legal conclusions, no

17   response is required. Paragraph 23 is also ambiguous and confusing. Microsoft is presently

18   without knowledge or information sufficient to form a belief as to the truth of the allegations and

19   characterizations in Paragraph 23 of the Complaint, and therefore denies them.

20   24.   To the extent Paragraph 24 of the Complaint implicates legal conclusions, no

21   response is required. Paragraph 24 is also ambiguous and confusing. Microsoft admits the

22   Asserted Patent is related to techniques for indexing and ranking information accessed through the

23   WWW and that information is constantly changing. Microsoft is presently without knowledge or

24   information sufficient to form a belief as to the truth of the remaining allegations and

25   characterizations in Paragraph 24 of the Complaint, and therefore denies them.

26   25.   To the extent Paragraph 25 of the Complaint implicates legal conclusions, no

27   response is required. Paragraph 25 is ambiguous, confusing and subjective. Microsoft admits that

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1   the Asserted Patent purports to improve the state of the art with, for example, "search results

2   provided in response to the query [that] are already ranked in accordance with the relevance to the

3   query." Microsoft is presently without knowledge or information sufficient to form a belief as to

4   the truth of the remaining allegations and characterizations in Paragraph 25 of the Complaint, and

5   therefore denies them.

6   **COUNT I**

7   **Infringement of U.S. Patent No. 7,356,530**

8   26.   Paragraphs 1–25 of Microsoft's Answer are incorporated by reference as if set forth

9   in full herein; Microsoft repeats and incorporates its Answer to Paragraphs 1–25.

10   27.   To the extent Paragraph 27 of the Complaint implicates legal conclusions, no

11   response is required. Microsoft admits that Exhibit A appears to be a copy of the Asserted Patent,

12   that Exhibit B appears to be at least a portion of the file history of the Asserted Patent, and Exhibit

13   C appears to be a Certificate of Correction for the Asserted Patent. Microsoft is presently without

14   knowledge or information sufficient to form a belief as to the truth of the remaining allegations

15   and characterizations in Paragraph 27, and therefore denies them.

16   28.   Denied.

17   29.   Denied.

18   30.   To the extent Paragraph 30 of the Complaint implicates legal conclusions, no

19   response is required. Microsoft admits that the Bing.com website can be used to access various

20   indexes of content accessed through the WWW. To the extent that a response is required,

21   Microsoft denies the remaining allegations and characterizations in Paragraph 30, including

22   because Microsoft does not infringe any valid claim of the Asserted Patent.

23   31.   To the extent Paragraph 31 of the Complaint implicates legal conclusions, no

24   response is required. Microsoft admits that it has tools that crawl content found through the

25   WWW, and that it uses information it has collected to build indexes to content it locates.

26   Microsoft denies the remaining allegations and characterizations in Paragraph 31, including

27   because Microsoft does not infringe any valid claim of the Asserted Patent.

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32.   To the extent Paragraph 32 of the Complaint implicates legal conclusions, no response is required. Microsoft repeats its response to Paragraph 31, and denies the remaining allegations and characterizations in Paragraph 32, including because Microsoft does not infringe the Asserted Patent and because Microsoft is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations and characterizations in Paragraph 32.

33.   To the extent Paragraph 33 of the Complaint implicates legal conclusions, no response is required. Microsoft admits that the Maguro paper describes aspects of a system it has used to build parts of the indexes accessed through Bing. The Maguro paper speaks for itself. Microsoft denies the remaining allegations and characterizations contained in Paragraph 33, including because Microsoft does not infringe any valid claim of the Asserted Patent.

34.   To the extent Paragraph 34 of the Complaint implicates legal conclusions, no response is required. Microsoft admits that the systems accessed through Bing use a variety of signals to help improve the quality of ranking, and that the words found in content that is indexed also assist in ranking a page. Microsoft denies the remaining allegations and characterizations in Paragraph 34, including because Microsoft does not infringe any valid claim of the Asserted Patent.

35.   To the extent Paragraph 35 of the Complaint implicates legal conclusions, no response is required. Microsoft admits that patents it has filed discuss various term frequency techniques to assist in ranking, and repeats its response to Paragraph 34. Microsoft denies the remaining allegations and characterizations in Paragraph 35, including because Microsoft does not infringe any valid claim of the Asserted Patent.

36.   To the extent Paragraph 36 of the Complaint implicates legal conclusions, no response is required. Microsoft admits that hyperlinks can be used in ranking content available through indexes used by Bing. Microsoft also admits that text near a hyperlink can also be used as part of a ranking analysis. Microsoft denies the remaining allegations and characterizations in Paragraph 36, including because Microsoft does not infringe any valid claim of the Asserted Patent.

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37.   To the extent Paragraph 37 of the Complaint implicates legal conclusions, no

2   response is required. Paragraph 37 is ambiguous and confusing, and Microsoft incorporates its

3   response to the above paragraphs in its response here. Microsoft denies the remaining allegations

4   and characterizations in Paragraph 37, including because Microsoft does not infringe any valid

5   claim of the Asserted Patent.

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38.   To the extent Paragraph 38 of the Complaint implicates legal conclusions, no

7   response is required. Microsoft admits that it employs various data structures to assist with

8   returning search results in response to a query entered at Bing, and the Maguro paper describes

9   aspects of such a structure. Microsoft denies the remaining allegations and characterizations in

10 Paragraph 38, including because Microsoft does not infringe any valid claim of the Asserted

11 Patent.

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39.   To the extent Paragraph 39 of the Complaint implicates legal conclusions, no

13 response is required. Microsoft admits that the Asserted Patent has been cited in the prosecution

14 histories of patent applications associated with Microsoft, and the fact that it has been cited is

15 apparent in the publicly available file histories of those applications. Microsoft denies the

16 remaining allegations and characterizations in Paragraph 39.

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40.   To the extent Paragraph 40 of the Complaint implicates legal conclusions, no

18 response is required. Microsoft admits that during prosecution of U.S. Patent No. 7,580,945, the

19 United States Patent and Trademark Office ("PTO") rejected claims 12 through 20 as obvious over

20 Dehlinger (U.S. Patent App. Pub. No. 2005/0198026) in view of the Asserted Patent, and further

21 admits that the PTO explained that "Kim discloses the instructions for controlling a computing

22 device to rank web pages with hyperlinks to other web pages . . . .". Except as specifically

23 admitted, Microsoft denies the remaining allegations and characterizations in Paragraph 40.

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41.   To the extent Paragraph 41 of the Complaint implicates legal conclusions, no

25 response is required. Microsoft admits that during prosecution of U.S. Patent No. 8,484,193, the

26 PTO rejected claims 12 through 20 as obvious over Dehlinger in view of the Asserted Patent.

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1   Except as specifically admitted, Microsoft denies the remaining allegations and characterizations

2   in Paragraph 41.

3   42.   To the extent Paragraph 42 of the Complaint implicates legal conclusions, no

4   response is required. Microsoft admits that during prosecution of U.S. Patent No. 8,244,737, the

5   PTO rejected all pending claims as obvious over Preda (U.S. Patent No. 7,076,483) in view of the

6   Asserted Patent, and that Microsoft's patent attorney distinguished its then-pending claims over

7   the combination of references. Except as specifically admitted, Microsoft denies the remaining

8   allegations and characterizations in Paragraph 42.

9   43.   To the extent Paragraph 43 of the Complaint implicates legal conclusions, no

10 response is required. Microsoft admits that the PTO maintained its rejection in light of the

11 Asserted Patent, and that on November 29, 2010, Microsoft's patent attorney requested continued

12 examination of the pending patent application and submitted a declaration from one of the

13 inventors on the application, Tie-Yan Liu, and that in his declaration, Dr. Liu explained that "I

14 have thoroughly reviewed . . . U.S. Patent No. 7,356,530 . . . .". Except as specifically admitted,

15 Microsoft denies the remaining allegations and characterizations in Paragraph 43.

16   44.   To the extent Paragraph 44 of the Complaint implicates legal conclusions, no

17 response is required. Microsoft admits that Dr. Liu is a Principal Research Manager at Microsoft

18 Research Asia, and that Dr. Liu's bio states that "many of his technologies have been transferred

19 to Microsoft's products and online services, such as Bing, Microsoft Advertising, and Azure" and,

20 in his declaration he identified Harry Shum as one of the three references in his resume. Except as

21 specifically admitted, Microsoft denies the remaining allegations and characterizations in

22 Paragraph 44.

23   45.   To the extent Paragraph 45 of the Complaint implicates legal conclusions, no

24 response is required. Microsoft admits that Hang Li's LinkedIn profile states that he "worked on

25 the development of several products such as Microsoft SQL Server 2005, Office 2007, Live

26 Search 2008, Bing 2009, Office 2010, Bing 2010, Office 2012, Huawei Smartphones 2014" and

27 that Bin Hao's LinkedIn profile states that he "contributed 10+ techniques to Microsoft Bing,

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1   BingAds, and XiaoIce." Except as specifically admitted, Microsoft denies the remaining

2   allegations and characterizations contained in Paragraph 45.

3   46.   To the extent Paragraph 46 of the Complaint implicates legal conclusions, no

4   response is required. Microsoft admits that the Asserted Patent was cited during the prosecution

5   of various patent applications filed by Microsoft at least as early as 2008. Microsoft denies the

6   remaining allegations and characterizations in Paragraph 46, including because Microsoft does not

7   infringe any valid claim of the Asserted Patent, and Microsoft did not have notice of any alleged

8   infringement of any valid claim by LookSmart at the time or until the filing of its Complaint.

9   47.   Denied.

10   **PRAYER FOR RELIEF**

11   Microsoft denies that LookSmart is entitled to any relief whatsoever, whether as sought in

12   the Prayer for Relief of its Complaint for Patent Infringement or otherwise, in connection with this

13   civil action.

14   **AFFIRMATIVE DEFENSES**

15   Pursuant to Federal Rule of Civil Procedure 8(c), Microsoft, without waiver, limitation, or

16   prejudice, hereby asserts the following affirmative defenses:

17   **FIRST DEFENSE**

18   48.   LookSmart's claims are barred in whole or in part because Microsoft has not, and

19   does not, directly infringe, induce infringement, or contribute to infringement of any valid and

20   enforceable claim of the Asserted Patent, either literally or under the doctrine of equivalents, and

21   has not otherwise committed any acts in violation of 35 U.S.C. § 271.

22   **SECOND DEFENSE**

23   49.   LookSmart's claims are barred in whole or in part because each asserted claim of

24   the Asserted Patent is invalid for failure to comply with the requirements of 35 U.S.C. §§ 101,

25   102, 103, 112, and/or of any other applicable statutory provisions of Title 35 of the United States

26   Code. With respect to § 101, LookSmart has essentially asserted in its Complaint that its patent

27   covers the abstract idea of ranking search results by applying a mathematical formula. These

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1 claims do not recite an inventive concept sufficient to ensure that the patent in practice amounts to

2 significantly more than a patent upon the abstract idea itself. *See Alice Corp. Pty. Ltd. v. CLS*

3 *Bank Int'l*, 134 S. Ct. 2347 (2014). With respect to § 112, it is unclear from the manner in the

4 claims have been asserted how there is support for a construction that is the basis for the alleged

5 infringement or that the asserted claims are definite. It is believed that the specification of the

6 Asserted Patent does not provide sufficient detail to a person of ordinarily skill in the art at the

7 time of the alleged invention how the "page weight" is determined. And with respect to invalidity

8 under §§ 102 and 103, it is believed that the prior art reference by Ilmério Silva *et al.*, "Link-

9 Based and Content-Based Evidential Information in a Belief Network Model," Proceedings of the

10 23rd Annual Int'l ACM SIGIR Conf. on Research and Development in Information Retrieval,

11 Athens Greece, July 24-28, 2000, pp. 96-103 (*see* Exhibit 1), teaches each of the elements as

12 alleged to infringe in the asserted claims identified in the Complaint. To the extent any limitation

13 is not found in the prior art, it is believed it would have been obvious to a person of ordinary skill

14 in the art at the time of the invention to add such a feature to the teachings of the prior art.

15 **THIRD DEFENSE**

16 50.   LookSmart is estopped from construing any valid claim of the Asserted Patent to be

17 infringed or to have been infringed, either literally or by application of the doctrine of equivalents,

18 by any product made, used, imported, sold, or offered for sale by Microsoft in view of prior art

19 and/or because of admissions, representations, and/or statements made to the Patent Office during

20 prosecution of any application leading to the issuance of the Asserted Patent or any related patent,

21 because of disclosure or language in the specifications of the Asserted Patent, and/or because of

22 limitations in the claims of the Asserted Patent. *See, e.g.,* Dkt. No. 1, LookSmart's Complaint, Ex.

23 B (the Asserted Patent file history) at 159-170 (2003-04-10 Non-Final Rejection), 172-186 (2003-

24 10-10 Office Action Response), 240-293 (2006-05-15 Office Action Response), 346-361 (2006-

25 08-22 Final Rejection), 367-389 (Office Action Response), 412-432 (2007-03-26 Non-Final

26 Rejection), 466-486 (2007-09-26 Office Action Response), 548-559 (2007-11-13 Notice Of

27 Allowance, Examiner's Amendment, and Examiner's Statement of Reasons for Allowance).

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FOURTH DEFENSE

51.   To the extent that LookSmart and any predecessors in interest to the Asserted Patent failed to properly mark any of their relevant products or materials as required by 35 U.S.C. § 287, or otherwise give proper notice that Microsoft's actions allegedly infringe the Asserted Patent, Microsoft is not liable to Plaintiff for the acts alleged to have been performed before the Complaint was filed.

FIFTH DEFENSE

52.   All claims of the '530 patent are unenforceable because, during prosecution of the application for the '530 patent, lead inventor Brian Kim committed inequitable conduct, upon information and belief, by deliberately withholding from the United States Patent & Trademark Office (the "PTO") a material prior art reference titled "The Anatomy of a Large-Scale Hypertextual Web Search Engine," authored by Sergey Brin and Lawrence Page (the "Google Anatomy Paper").

53.   An authentic copy of the Google Anatomy Paper is attached as Exhibit 2 (Kim Deposition Exhibit 10).

54.   The Google Anatomy Paper qualifies as prior art to the asserted claims of the '530 patent.

55.   The Google Anatomy Paper is a material prior art reference because the PTO would not have allowed claims 1, 6, 10, and 12 of the '530 patent, if it had been aware of this reference.

56.   The Google Anatomy Paper corresponds to the limitations found in, for example, claims 1, 6, 10, and 12 of the '530 Patent, including the limitations that the PTO identified as being absent from the record in its Notice of Allowability. *See, e.g.*, Dkt. No. 1, LookSmart's Complaint, Ex. B (the Asserted Patent file history) at p. 10 (Nov. 13, 2007 Notice of Allowability) ("[Prior art] fail [sic] to teach determining an intrinsic ranking factor for the selected page for each word in the set of words by determining a content score for use of the selected word on the selected page and adjusting the ranking for a page weight associated with the page being ranked

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1   and determining an extrinsic ranking factor for remaining pages in the collection of pages for use

2   of said each word in association with an outbound link to the selected page by determining an

3   anchor weight for the page being ranked and adjusting the ranking for a page weight associated

4   with the page being ranked.").

5   57.   For example, the Google Anatomy Paper teaches that the Google systems crawls

6   the Web to produce a collection of pages without limitation to topic. *See, e.g.*, Exhibit 2 (Google

7   Anatomy Paper) at Abstract ("Google is designed to crawl and index the Web efficiently and

8   produce much more satisfying search results than existing systems."); pp. 8, 9 (§ 4.3 Crawling the

9   Web).

10   58.   The Google Anatomy Paper teaches that the Google system computes a page

11 weight for each page. *See, e.g.*, *id.* at p. 4 (§ 2.1.2 Intuitive Justification) ("We assume there is a

12 'random surfer' who is given a Web page at random and keeps clicking on links, never hitting

13 'back' but eventually gets bored and starts on another random page. The probability that the

14 random surfer visits the page is its PageRank.").

15   59.   The Google Anatomy Paper teaches that the Google system computes a content

16 score. *See, e.g.*, *id.* at p. 7 (§ 4.2.5 Hit Lists) ("A hit list corresponds to a list of occurrences of a

17 particular word in a particular document . . . . There are two types of hits: fancy hits and plain hits.

18 Fancy hits include hits occurring in the URL, title, anchor text, or meta tag. Plain hits include

19 everything else.").

20   60.   The Google Anatomy Paper teaches that the Google system computes an anchor

21 weight. *See, e.g.*, *id.*, ("Fancy hits include hits occurring in the … anchor text.").

22   61.   The Google Anatomy Paper teaches that the Google system combines and adjusts

23 the content scores and anchor weights by a page weight to determine a final rank for each page for

24 each word. *See, e.g.*, *id.* at p. 10 (§ 4.5.1 The Ranking System) ("Google looks at the document's

25 hit list for that word. Google considers each hit to be one of several different types (title, anchor,

26 URL, plain text large font, plain text small font, …), each of which has its own type-weight. The

27 type-weights make up a vector indexed by type. Google counts the number of hits of each type in

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1   the hit list. Then every count is converted into a count-weight. Count-weights increase linearly

2   with counts at first but quickly taper off so that more than a certain count will not help. We take

3   the dot product of the vector of count-weights with the vector of type-weights to compute an IR

4   score for the document. Finally, the IR score is combined with the PageRank to give a final rank

5   to the document.").

6   62.   As described further in the allegations below, Mr. Kim had an intent to deceive the

7   PTO, which can be inferred from (1) his sworn acknowledgement to the PTO regarding his duty to

8   disclose all information known to be material to the patentability of subject matter of the patent

9   application, (2) his awareness and possession of the Google Anatomy Paper, (3) his understanding

10   of the relevance of this prior art reference to the subject matter of the patent application, (4) his

11   reliance on this prior art reference in conceiving the purported invention in the patent application,

12   (5) his mischaracterization of the scope of the purported invention by intentionally omitting that

13   this reference successfully solved the problem that the purported invention was seeking to solve,

14   and (6) his failure to disclose this reference to the PTO.

15   63.   As an inventor of the '530 patent, Mr. Kim had a duty of candor and good faith to

16   the PTO, which included an obligation to disclose to the PTO all information that he knew was

17   material to the patentability of the application for the '530 patent.

18   64.   Mr. Kim was aware of this duty, which he confirmed in his signed declaration to

19   the PTO. Dkt. No. 1, LookSmart's Complaint, Ex. B (the Asserted Patent file history) at pp. 92,

20   93 (May 3, 2001 Declaration and Power of Attorney for Patent Application) ("I acknowledge the

21   duty to disclose all information, which is material to patentability.").

22   65.   Mr. Kim had possession of a copy of the Google Anatomy Paper in 2000—prior to

23   the filing of the application for the '530 Patent. Exhibit 3 (June 15, 2018 Dep. of Brian Kim),

24   178:23-180:3.

25   66.   In particular, upon joining WISEnut in the summer of 2000, WISEnut's engineers

26   gave Mr. Kim certain prior art references, including a copy of the Google Anatomy Paper, to help

27   familiarize him with the search engine space. *Id.* at 178:23-180:3.

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67.   Mr. Kim reviewed the Google Anatomy Paper and understood that this reference described the architecture for the search result ranking algorithm used by the Google search engine. *Id.*

68.   Mr. Kim used the Google search engine prior to conceiving the purported invention of the '530 patent. *Id.* at 35:8-13, 37:11-13.

69.   Mr. Kim admitted that the Google Anatomy Paper was relevant to his purported invention. *Id.* at 194:8-195:4.

70.   Upon information and belief, Mr. Kim relied upon the Google Anatomy Paper in drafting a white paper that, according to LookSmart, demonstrates the conception of the purported invention of the '530 patent. *See* Exhibit 4 (WISEnut Search Engine White Paper, hereinafter "Kim White Paper"), -319.

71.   The Kim White Paper, which Mr. Kim authored in 2000, cites to the Google Anatomy Paper that Mr. Kim received and reviewed upon joining WISEnut. *Id.* at -328 (excerpted below).

Reference

[Page98] S. Brin and L. Page, *The Anatomy of a Large-scale Hypertextual Web Search Engine*, Computer Networks and ISDN Systems 30, 107 (1998).

[Klein98] Jon Kleinberg, Authoritative sources in a hyperlinked environment. *Proceedings of the Ninth Annual ACM-SIAM Symposium on Discrete Algorithms*, 1998.

72.   The Kim White Paper states that some existing search engines had recognized that link structure, including the "number of links to a page," helps "assess the importance of the page." *Id.* at -320.

73.   Simply counting the inbound links, as the Kim White Paper continued to explain, is not sufficient because doing so gives little weight to links originating from well-respected or frequently visited websites, such as Yahoo. *See id.* The Kim White Paper then acknowledges that

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1   this link counting problem had been solved by Google's PageRank algorithm. *Id.* The relevant

2   portion of the Kim White Paper is excerpted below:

> Recently, some of the search engines started to realize that there is very much valuable information buried in the structure of the Web to rank the pages in more objective way. Unlike standard paper documents, the Web includes hypertext, which links one page to another and provides significant information through the link structure. For example, the inbound links to a page help to assess the importance of the page. Because some of the inbound links originate from authors other than the one who wrote the page being considered, they tend to give a more objective measure of the quality or importance of the pages. By making a link to other page, the author of the originating page endorses the destination page. The more inbound links a page has, the more likely the page is important.
>
> Simple counting of inbound links, however, will not tell us the whole story. If a page has only one inbound link, but that link comes from a highly weighted page such as the Yahoo! home page, the page might be reasonably ranked higher than a page that has several inbound links coming from less visited pages. Thus, to make your page highly regarded in this kind of ranking system, you need to convince a lot of other people to put links to your page on their pages, especially from highly respected pages. PageRank™ used by Google, for example, is utilizing this observation in their ranking system. Many experts attribute the early success of Google to their ranking system.

74.   The Kim White Paper next purports to introduce a ranking system with a name similar to Google's PageRank: WISErank. *Id.* at -320, -321.

75.   This WISErank algorithm, as described in the Kim White Paper, uses a concept called page weight to "assess the relative value of each Web page," which, in certain cases, "assumes similar form as PageRank used by Google." *Id.* at -321, -322.

76.   Upon information and belief, Mr. Kim did not provide the Kim White Paper to Mr. Moll or any other prosecuting attorney. Mr. Moll testified in deposition that he did not recall seeing the Kim White Paper. Exhibit 5 (July 24, 2018 Moll Dep.), 139:2-8, 136:8-137:11.

77.   The Kim White Paper was also absent from the production of the non-privileged prosecution files received from Mr. Moll or any of the firms that subsequently prosecuted the application for the '530 patent.

78.   Upon information and belief, Mr. Kim drafted or directed Mr. Moll to draft portions of the application for the '530 patent. Mr. Moll testified in deposition that he and Mr. Kim collaboratively drafted the application for the '530 Patent. *Id.* at 60:16-61:9, 136:8-137:11, 128:7-129:4.

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79.   The '530 Patent's Background identifies the same problems in the art as identified in the Kim White Paper, but the Background critically omits that the prior art, including the Google Anatomy Paper, already successfully solved these problems.

> Unlike standard paper documents, the Web includes hypertext, which links one page to another and provides significant information through the link structure. For example, the inbound links to a page help to assess the importance of the page. Because some of the inbound links originate from authors other than the one who wrote the page being considered, they tend to give a more objective measure of the quality or importance of the pages. By making a link to other page, the author of the originating page endorses the destination page. Thus, to make your page highly regarded in this kind of ranking system, you need to convince a lot of other people to put links to your page in their pages.
>
> Simple counting of inbound links, however, will not tell us the whole story. If a page has only one inbound link, but that link comes from a highly weighted page such as the Yahoo! home page, the page might be reasonably ranked higher than a page that has several inbound links coming from less visited pages.
>
> SUMMARY OF THE INVENTION

80.   In particular, as shown in the above excerpt from the Background, the '530 patent recognizes that links help assess the importance of the page, but omits the portion of the Kim White Paper stating that some prior art search engines were known to be using more sophisticated link counting algorithms to determine relevancy of pages. *See id.* Dkt. No. 1, Ex. A ('530 Patent), 3:27-40.

81.   Moreover, the above excerpt from the Background is immediately followed by the Summary of the Invention, thus incorrectly suggesting that the known prior art did not solve these problems that the purported invention of the '530 Patent was addressing.

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82.   The specification of the '530 Patent omits any reference to Google's algorithms described in the Google Anatomy Paper, including that the page weight is similar to Google's PageRank. *See* Dkt. No. 1, Ex. A ('530 Patent), 7:13-8:19.

83.   The '530 Patent also omits how Google's PageRank algorithm was used in conjunction with the overall ranking algorithm described in the Google Anatomy Paper.

84.   In particular, the '530 Patent omits that Google's system computed a score for the content of each page by maintaining a count for each word on each page to create a hitlist. *See* Exhibit 2 (Google Anatomy Paper), p. 7 (§ 4.2.5 Hit Lists).

85.   The '530 Patent also omits that Google's system computed a final rank, which was not simply the PageRank, but a value derived by combining multiple computed values, as described in the Google Anatomy Paper. *See id.* at p. 10 (§ 4.5.1 The Ranking System).

86.   In his signed declaration to the PTO, Mr. Kim confirmed that he had "reviewed and understood the contents of the . . . specification, including the claims." Dkt. No. 1, LookSmart's Complaint, Ex. B (the Asserted Patent file history) at pp. 92, 93 (May 3, 2001 Declaration and Power of Attorney for Patent Application).

87.   Yet, despite (1) having reviewed the specification that he drafted and/or directed the drafting of and (2) having a duty to disclose all information material to patentability, Mr. Kim did not revise the specification to identify the teachings of the Google Anatomy Paper that he knew to successfully solve the problem the application for the '530 patent was addressing.

88.   Upon information and belief, Mr. Kim did not give the Google Anatomy Paper to Mr. Moll. Mr. Moll testified in deposition that, while he could not remember exactly, he probably did not receive the Google Anatomy Paper from Mr. Kim because he "usually remembers when people give [him] something." Exhibit 5 (July 24, 2018 Moll Dep.), 142:3-24.

89.   Mr. Moll also stated that his practice is to collect and provide to the PTO any prior art (including the references themselves or links to such references) that he receives from inventors. *Id.* at 79:15-81:3.

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90.   With respect to the Google Anatomy Paper, Mr. Moll stated that, consistent with his practice, he would have submitted the Google Anatomy Paper to the PTO had he received it because this reference concerns the same subject matter (search engine technology) as the '530 Patent. *See id.* at 115:9-116:1.

91.   Thus, if Mr. Moll had received the Google Anatomy Paper from Mr. Kim or any of the other inventors, Mr. Moll would have collected this reference in his prosecution files and submitted it to the PTO. *Id.* at 75:2-77:8.

92.   During the time he was working for WISEnut, Mr. Moll did not submit any prior art to the PTO. *Id.* at 74:11-75:4.

93.   Mr. Moll's prosecution files for the '530 patent, received in response to a subpoena by Microsoft in this litigation, did not include the Google Anatomy Paper.

94.   After WISEnut discharged Mr. Moll in September 2001, the prosecution of the application for the '530 patent was handled by three different law firms over the next seven years.

95.   Mr. Moll transferred his entire prosecution file to the attorneys who took over prosecution next. *Id.* at 70:22-71:11.

96.   None of the prosecution files at each of these firms, which were received in response to subpoenas served on these firms by Microsoft in this litigation, included the Google Anatomy Paper.

97.   The Google Anatomy Paper was never cited to the PTO.

98.   In view of the above, Mr. Kim committed inequitable conduct by intentionally withholding from the PTO the Google Anatomy Paper, which was material to the patentability of the application for the '530 patent.

RESERVATION OF ALL AFFIRMATIVE DEFENSES

99.   Microsoft hereby gives notice that it intends to rely upon any other matter constituting an avoidance or affirmative defense as set forth in Rule 8(c) of the Federal Rules of Civil Procedure, and that it reserves the right to seek leave to amend this Answer to add to, amend, withdraw, or modify these defenses as its investigation continues and as discovery may require.

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Dated: September 26, 2018

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